



REACH

Review of the Edmonton Atari Computer Hobbyists

#26

FREE

BUT THERE AIN'T NO CURE /
FOR THE SUMMERTIME BLUES...

by ye Editor

Truer words were never spoken, eh? The summertime blues have hit E.A.C.H. in a big way. Meeting attendance is way down, as are (obviously!) newsletter contributions. No cover illustration, either. Sigh. Oh well, it should pick up next month (I hope!) and we can start looking more presentable again. (Hopefully, we'll be able to proudly present a Dave Beale construction project... look for it!)

FLOGGING

(as in dead horses)

Two months ago, in REACH #24, I reprinted an article from LA-ACE (via M.A.G.I.C.) on ST software piracy. A collection of CompuServe messages, the gist of it was that pirating is hurting the ST software market and we may be headed for increased copy protection and (eventually) the death of the ST from pirating-related causes. In reaction, Dave Beale wrote an article for last month's issue. His opinions were that copyguarding software WOULD NOT prevent piracy; that, although there are pirates, most people who actually USE a program WILL purchase it; and that software companies should work to bring prices down, produce good manuals and so on, to ensure that everyone who really uses a program will want to buy it.

Well, to coin a phrase, "it's not over 'til it's over." This month, Jeff Lewis gets into the act with an article on the roots of copyrights and patents, which will lead into a more computer-oriented piece next month. Now,

E.A.C.H.
EDMONTON ATARI COMPUTER HOBBYISTS

Newsletter

E.A.C.H. is an independent non-profit society formed to provide information and support to the Atari users of Edmonton and area. The club meets at 7:15 p.m. on the first Tuesday of every month, in room U116 of the Central Services Building at NAIT. See the map on the inside back cover for details.

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Memberships

Joining E.A.C.H. entitles you to complete access to our extensive public domain software libraries, free classified ads in REACH, a higher level of access on the club BBS, plus REACH will be mailed to you if you miss a meeting.

Membership fees are \$24 a year for the first two months of the year and are thereafter charged at a rate of \$2 for each month remaining in the year. The membership year runs from January 1 to December 31. Students are charged only 1/2 of the regular rates. To join the group, or for more information on becoming a member, call Maurice Hilarius at 431-0671 or write to him at:

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Articles and inquiries pertaining to this newsletter may be sent to:

R.E.A.C.H.
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This newsletter was produced with an Atari 130 XE, PaperClip from Batteries Included, The Print Shop from Broderbund, and an Epson FX-80 Printer.

**Anyone have any ideas about what we
should put in this little space?**

-Ed.

(cont.) to some people this may seem like flogging a dead horse; hasn't it all been said before? Obviously, I don't think so, or I wouldn't be running the article. Jeff's article is a comprehensive, historic look at the origins of the issue; it doesn't just endlessly rehash the arguments. As for complaints that REACH is dragging out the issue - I don't know about you, but most people I've talked to have strong opinions about piracy/copying and the morality of it all. I think there is enough interest to justify several articles on the topic. Finally, to throw down the gauntlet; if you don't like it, then please write me a note or leave me E-mail and tell me why. Better yet, write an article to replace the one you want deleted!

DID YOU KNOW...

... that this is the 38th newsletter to be published by Atari users in Edmonton? And that 20 of those (over half!) have been published by yours truly? A genuine shocker. So, any strong opinions out there? Am I doing the job to your satisfaction? Among other things, I've tried to keep the newsletter fairly informal, with lots of bright colours and a somewhat-varying header for the front cover (and occasionally rather strange humour). Should this change? Do you want a more serious outlook from the newsletter? If you do, you owe it to yourselves (and, I think, to me) to speak out and let your voice be heard. Thanks.

NEW FACES

For those of you who didn't make it to the last meeting or two, BRUCE DUNLOP is our new vice-president (replacing the long-suffering Mike Brown) and KEVIN WHITHAM has replaced the departed Peter Braun as ST Software Librarian. I'd like to welcome these individuals to the executive both personally and (I'm sure) on behalf of all of the members. They have both volunteered many hours of their time towards helping E.A.C.H. become bigger and better. And will it be worth it? Well, let me put it this way: "There's no life like it!" And that's saying a lot!

Until next time... watch out for sharks!

-Phil

NOTE TO ALL 8-BIT USERS:

The 8-bit SIG returns! DAVE HOWARD is trying to stir up some enthusiasm for an 8-bit SIG, so this is your chance! Stand up and be counted! Call him with your comments and suggestions at 481-1501.

tiddits 'n' bytes

Hello, soup fans. I recently went through some of the recent newsletters we've received in exchange with other clubs, and gleaned some information I thought you might find interesting. (And need I remind you that these are available at the general meetings to be signed out and read - in the privacy of your own home, yet?)

For all of you TURBO BASIC programmers out there, the July issue of the SLCC Journal contains a TURBO BASIC fractal drawing program listing (written by Jerry Telfer). You may want to check it out. From the same issue of the Journal, Jennie Kliwer gives us the following hints for Sierra On-Line's Space Quest:

- 1) Search the bodies on the Arcada spaceship.
- 2) There is a way to hide against the walls to avoid being disintegrated by a Sarien.
- 3) When playing the slot machine, each time you win 10 buckazoids save the game - you'll need a lot of them to buy a ship and a droid.
- 4) Orat would not accept an invitation to a swim party.
- 5) Be sure to have more than one drink at the bar.

T. Bird, of the Midwest Atari Group - Iowa Chapter, tells us that according to the June-July issue of Computer Gaming World, Strategic Simulations, Inc. and TSR Hobbies Inc. have signed a letter of intent to cooperatively produce computer games based on TSR's Advanced Dungeons & Dragons. They plan to release at least 10 different role-playing games and several action games for (as T. Bird says) "all the systems that SSI normally supports. Hopefully, that includes us." (RUNES, July '87)

In the June/July issue of The Pokey Press! is a transcript of a CompuServe conference with none other than... Trip Hawkins, head honcho of Electronic Arts. ST owners should soon be seeing The Bard's Tale, Music Construction Set, and Deluxe Print, and (from the ECA affiliated labels) Ultima IV, 221B Baker Street, and Gridiron. PaperClip Elite was mentioned as coming out in a matter of months, rather than weeks or years. In terms of software protection, ECA seems to be heading towards keeping copy protection on its games but using "key

disk" protection (i.e. the program is unprotected but requires you to insert the original disk once when you boot it up) for their creativity and productivity software (including BI programs). Finally, the regular ECA customer support line is 415-572-ARTS, and the special BI number is 415-578-0316.

From the June issue of CAFE Comments comes the news that the Commodore 1350 mouse (for the C128) will plug into your 8-bit and operate as a joystick emulator. Jay Pierstorff tells us that you need a joystick extension cable because the pins are too short on the 1350, but otherwise it works just dandy. It's not a full-fledged (optically-driven) mouse, but it apparently does a pretty good job of making you think it is.

From the April issue of The Pokey Press! (via the July KC-NACE newsletter) comes info on some upcoming software for the 8-bits. From Mindscape we get "Infiltrator", a helicopter rescue game featuring Johnny "Jimbo-Baby" McGibbits, "a combination rock star, surgeon, helicopter pilot, and all-around swell guy." Hi-Tech Expressions brings us "Award Ware", a program to produce certificates, tickets, and the like. From Electronic Arts, a new and improved version of Ultima I. Penguin/Polarware should be bringing us "The Coveted Mirror", similar to their "Transylvania" and "The Crimson Crown" games.

Finally, a list of the newsletters EACN receives via exchanges: Bytown Bytes (NCAUG, Ottawa), Phoenix (TAF, Toronto), 01' Hackers Newsletter (OHAUG, New York State), MACUG (Minot, North Dakota), Runes (MAGIC, Iowa), NOAUG (New Orleans), the SLCC Journal (San Leandro, CA), the Acusoft Journal (Fayetteville, North Carolina), CAST.RSC (Calgary), JACG (New Jersey), CAFE Comments (Texas), Dateline: Atari (BASIC, New York), KC-NACE (Kansas City), The Cursor (Saskatoon), Page 6 (Calgary), STATUS (Virginia), The Pokey Press! (Florida), ABBUC e.V. (West Germany), and probably a few more that I've forgotten about! As you can see, there's a lot of fellow Atarians out there - how about reading up on how they're doing?

Keep smilin'!

-Phil

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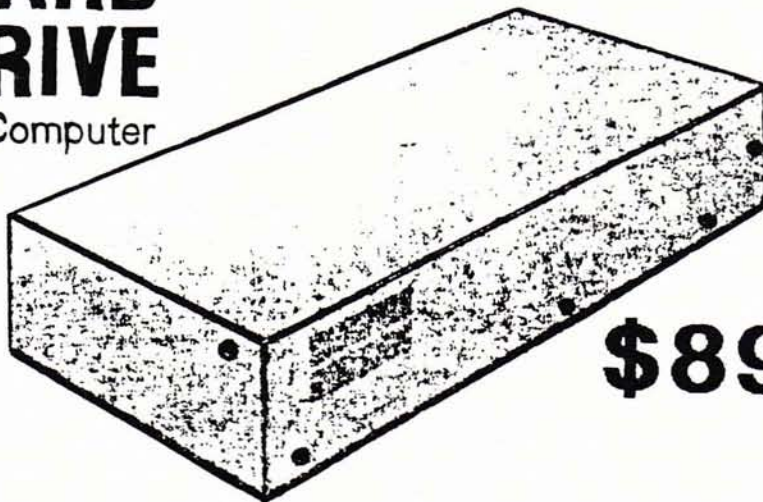
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ST DIGI-DRUM

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Review by Ted McNicol

(Reprinted with thanks from the June 1987 issue of Bytown Bytes, the newsletter of the National Capital Atari Users' Group)

The above convoluted listing of companies involved in getting you this product may give some indication of the route it has taken. Add to this the fact that there are 4 pages of English instructions and 9 pages of German text (larger type?). The intrigue grows.

When I was at the Buffalo Atari-Fest, the Michtron booth was displaying a number of new products, including this one. At the age of twelve, I started taking drum lessons. In Sea Cadets, I quit because they didn't need any more drummers. At the age of twenty, I bought a set of Ludwigs and started taking drum lessons. So naturally I whined and pleaded with the folks at Michtron for a look at this product.

Could it fill the gap in my life? Would I never take the sticks out of the closet again? No, but I have now discovered the Great Composer. And the product has passed a further acid test. My son, Mark, who has turned up his nose at some of my favourite software, took to this package like a duck to soup.

But what does it do? How does it work? A very simple menu bar appears at the top of the screen. The cursor keys are used to move across and to pull down the desired window. For instance, the Play Song option is activated by the down cursor and plays the song which is currently in memory.

The Edit Pattern window gives a grid with 16 rows, each of which contain one instrument, such as closed hi-hat, electric snare, clap or a drainpipe. With a REPLAY cartridge, which is another new product I hope to tell you about later, it is possible to sample other sounds and load them. The grid has anywhere from 4 to 32 columns, with each column equating to a beat.

The instrument to play is selected by entering a 1 or a 2 (equivalent to the ST sound channels) in the column on the row for that instrument. Sounds simple. It is. The only complaint I have here is that to get down to the bottom of the grid requires pressing the cursor key 16 times (no repeat feature or vertical scrolling).

Once a pattern is built up, it can be saved and the next pattern can be entered. Up to 99 patterns are available, which allows for a very complicated song.

The Edit Song option is where you put together the patterns. Up to 70 steps can be linked, and steps can call for patterns to be repeated up to 99 times. Each step is numbered and there is even a branch feature, to go to a particular step. This could save on entry, in repeating a number of patterns for a continuous loop.

Other useful features are not neglected. Two playback speeds are provided, although 20 KHz is recommended. The tempo of the songs or patterns can also be adjusted between 1 second wait per beat and less than .1 second wait per beat.

And, of course, patterns, songs and even sound samples (if available) can be saved to disk for perfection later.

The ST speaker is somewhat strained by this, although the sound definition is quite good. When two sounds are selected per beat, it is difficult to identify both. However, the REPLAY cartridge appears to allow for hookup to a stereo, which would improve immensely on the sound quality.

I was very impressed with the ease with which I could learn to use this package. As you know, beauty is in the eye of the beholder, and my son and I have spent a lot of time congratulating ourselves on our creations. For a professional musician, this product could have a lot more utility or it could be only a toy. But for me, it has provided more than a few hours of fun.

Would I recommend buying it? Only for those 90% of you who are frustrated musicians. For the rest, too bad for you. I give this package a rating of 6.5 out of 10 on my admittedly biased scale. With a REPLAY cartridge, if the promised features work properly, this could easily climb to 8. Even without the cartridge, I like it.



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Turbo Basic XL

A Review

By Mike Brown

I should preface my comments by saying that I am an experienced (but not terribly good) BASIC programmer. My opinion of Turbo BASIC XL, however, can be summed up in one word: "ho-hum!!" (Is that two words?)

To explain: I was asked (or I volunteered) to review the program TURBO BASIC XL. This is a public domain upgrade to Atari BASIC and is available in our PD 8-bit library. I have tested the language as follows:

- 1> I tried to run it using DOS's other than 2.5 (also trying to get it to work in double density),
- 2> I ran a number of benchmark programs to verify the claims to faster execution, and
- 3> I tried to use the compiler.

I tried to get TURBO to run with SPARTADOS first because it's my favourite DOS but found it would not work at all. When I booted the disk, the computer locked up. This happened in both single and double density. I then tried MACHDOS and was pleasantly surprised to find that it does work in both densities (I didn't try 1050 enhanced density since everyone I know considers it less than worthless). The next DOS to try was SMARTDOS from RANA. I found that it would load and run BASIC files in both single and double density if you boot straight to BASIC. If you then issue a DOS command, however, the system locks up. Last but not least came good ol' 2.5 from Atari. I found that it would run the BASIC just fine as well as the compiler and runtime package (in most cases... more later). In no case did I find the ability to go from TURBO BASIC to DOS and back again. The reason is obvious: this isn't a cartridge BASIC and the XE built-in BASIC is switched off. The autorun file could be run from the DOS menu item "M" if you could figure out the address (I couldn't). Failing this you have to use DOS "L" command to Load the file "AUTORUN.SYS".

The next step was to collect and use

a set of benchmark programs. I searched through back issues of just about every computer magazine I could get my hands on and came up with three benchmark programs:

- 1> a short routine from David Ahl of Creative Computing which uses 100 iterations of calculating squares, square roots, random numbers, and so on. This is fairly heavy on the number crunching.
- 2> "The Sieve of Erasthones" from Compute! February 1985. This produces prime numbers and relies on addition and logical choices - little in the way of number crunching.
- 3> Another Compute! routine from January 1985. This creates an array of 150 numbers then sorts them - includes dimensioning, looping, relational comparisons.

I built into each benchmark a short self-timing routine from ANTIC (April '86) and ran each of the benchmarks using the TURBO BASIC, the version C BASIC built into my XE, and version A from a cartridge. The results are as follows:

Test 1>

AHL's:	Turbo	41.36 seconds
	Ver.C	404.16 seconds
	Ver.A	404.08 seconds
Eras...:	Turbo	116.0 seconds
	Ver.C	282.46 seconds
	Ver.A	284.56 seconds
Jan85:	Turbo	224.61 seconds
	Ver.C	536.26 seconds
	Ver.A	539.83 seconds

If anyone is interested in seeing the benchmark programs, just let me know. I'd be glad to bring the listing to the next meeting or even reprint them in the next REACH.

As you can see, the TURBO BASIC does run significantly faster depending, of course, on what the program is trying to do. The most significant increases show up in the Ahl test which is heaviest in number crunching, so expect any program that does a lot of calculations (especially exponential ones) to really

Turbo Basic XL

A Review

By Mike Brown

zip along compared to ATARI BASIC. [By the way, if you want to know what version of BASIC you have, enter the following: "PRINT PEEK(43234)". Version A returns a "162"; version B a "96"; version C a "234"; and TURBO a "0".] The other tests only show a twofold increase. Since you have to load the BASIC as a separate file at disk speed rather than at cartridge speed as with the built-in version, and since you can't go to DOS without having to reload BASIC when you want to go back to your program, I have to wonder if it's all worth it. "But what about the compiler?" you ask. Thanks, I'm glad you did.

I won't go into how to use the compiler since this is covered by the documentation file on the same disk as the program. I will, however, attempt to translate the German that will fill your screen when you use it. The following is a very rough translation provided for me by a German friend who knows nothing about computers:

Welches Programm soll compiliert werden
(Which Program should be compiled)
Geben sie zuerst die laufwerksnummer
zwischen 1 und 8 ein, und wahlen das
programm dann mit den pfeilsten +*==
(first give the drive number between 1
and 8 then choose the program with the
arrow keys +*==)
Dann return drucken (then press return)
Ruckker zum DOS (return to DOS)
Keine fehler programmlaenge (no errors
program length)
Filename fuer das compilierte programm
(filename for the compiled program)
Noch einmal speichern (store once more?)
Fehler -# in zeile nnnnn (error in "word"
nnnnn)[You tell me what that means]
Bitte eine taste drucken (please press a
key)

I used the program to compile one of the TURBO BASIC demo programs on the disk and not only did it run, but it did run significantly faster. I then tried to compile a program in ATARI BASIC. I chose the program that the Executive used to use to invoice the dealers for their

advertising. It's a fairly long listing but not very complicated so it seemed a good test. The documentation on the disk does mention a couple of problems that the compiler cannot handle: the BASIC "END" command and a FOR-NEXT loop with two or more NEXT's for one FOR. Guess what my program had. A complicated FOR-NEXT with a variable value for the counter variable written as two FOR-NEXT statements on separate lines with appropriate branching depending on whether you want a packing slip or an invoice. The darned thing wouldn't compile. I had to REM out the line for packing slips and try again. This time it compiled (fairly quickly too). Feeling kinda smug at overcoming the problem so quickly, I copied the runtime onto the test disk, renamed it autorun.sys, and quickly booted up the new disk. The compiled program took a tiny bit longer to load than the original BASIC one had (12 seconds versus 11) and appeared to be working just fine until I tried to print out the invoice. It printed complete garbage for about 5 lines on the printer then locked up the system!

I went over all the instructions several times but found no error on my part. I can only assume that some logical inconsistency cropped up during the compile that resulted in the results I got. This is quite disconcerting since I got no error messages during either the compile or the execution of the compiled program. In my case it locked up leaving no doubt that it was garbled. I couldn't help thinking, however, "what if it was a calculation type of program and didn't lock up - could I trust the results?". The answer, of course, is "no" - I couldn't and won't. Because of this lack of faith in the accuracy of the compiler, I personally refuse to use it. This leaves us with a BASIC interpreter which has to be loaded from disk, has to be reloaded if you access DOS, and runs significantly faster only if the program is a heavy number cruncher. Like I said, "HO-HUM".

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ATARI EXPRESS

by Jeff Lewis

Piracy: Marketplace Realities

This article is an attempt to bring a little reality into what seems to be a resurgence of anti-piracy hysteria. Before I begin, though, I want to start by eliminating the word "pirate". That word is a "hot button" word, designed to invoke various emotional reactions in various people. The only problem is that it evokes almost all the wrong reactions in the wrong people. Worse, it is a pointless gesture which does very little towards understanding or resolving the issues. For this article, I shall use the word "copier".

So, after two years of steady turning away from copyguarding, why has there suddenly been a radical return to this issue? Well, in truth, there hasn't been. As best as I can determine, the whole flare-up can be traced to a number of conversations on services such as Compuserve by several Atari program writers.

Before we go much further, let's examine where we've come from. What is copyright, and why does it exist?

First, a quick explanation of copyright and patents. A copyright is a legal protection that ensures that the author of an intellectual work is protected from loss of ownership and revenue. What it basically means is that if you create an intellectual work, only you have the right to determine who can have a copy, and who can give out further copies. Today, a copyright is owned for the life of the author, plus an additional fifty years. A patent is a different sort of protection which protects a process for a period of seventeen years. After that, no one has ownership of the process, and all can use it. Patents were devised because it was seen as too dangerous to allow any one company or person to hold a long-term monopoly on a technique.

Note that neither of these protects an idea, only the physical manifestation

of an idea. Copyright protects intellectual forms of ideas (books, plays, paintings and such), while patents protect industrial forms of ideas (chemical processes, special devices and so on).

Now, let's see how all this got started, and how it got so screwed up. Originally, the reason for copyrights was much simpler. In the medieval ages, to reproduce a book meant literally writing it out by hand. Books were scarce and owned by a very elite group; paintings too. Most forms of intellectual work were the domain of the wealthy and educated, and of the church. However, the movement of books tended to be slow. If a book was created in England, it might take decades for it to arrive in Rome. So, if a clever fellow took up a copy in England and sailed for Rome, whereupon he commissioned a reproduction with HIS name on it, he could become famous and possibly wealthy for the works of another, and it might never be discovered. At this point, the purpose of copyright was to protect intellectual ownership. If a person wrote a book, he wanted it to be known that HE wrote it.

When the Gutenberg printing press came out, things changed radically. Suddenly, books could be mass produced. This produced two effects. First, books could be mass marketed. True, a mass market in those days tended to be fairly small, but it was vastly greater than what used to exist. Second, books became easier to manufacture. This meant an upswing in the number of works. This was the beginning of a major change in the direction of copyrights. For the first time, a copyright protected not merely intellectual ownership, but also the revenue which could be derived from that work.

Well, time passes; the industrial revolution takes hold and slowly the standard of living improves as does the average literacy rate. By the 1800's newspapers come into existence and gain wide popularity with a population eager

ATARI EXPRESS

to read. Now the focus of copyright is less and less on protection of intellectual ownership, and more and more on protection of revenue.

As we enter the 1900's several startling things emerge from technology. First, the gramophone and sound recording. Next, the radio and then television. Up to around the mid-1940's, everything is reasonably OK. Then all hell breaks loose. In short succession, we get magnetic tape audio recorders, video recorders and the perfection of xerography. As well, we start to see a shift to magnetic tape as a storage medium for computers. It was at that point (1940-1955) that the real "disaster" hit - only at the time, no one noticed it.

By 1965, audio tape decks, while still a novelty, were becoming common. Most minicomputers were using multitrack tape. Even video recorders were being sold to the very rich.

The next major technological "disaster" came in the late 1960's with the invention of cassette tape. Incredibly easy to use, and with a fidelity that was becoming increasingly good, this represented the very first challenge to copyrights. It was so simple to record music directly off radio, or off records or even other tapes. Anyone could do it, and there was no way to prevent it.

The music industry was in a turmoil. Revenues were dropping off as people got together and bought one copy of an album and make several copies. Even worse, the number of people who were happy enough with recordings made off-air from radio broadcasts showed the industry that the basic presumptions about what people wanted were wrong.

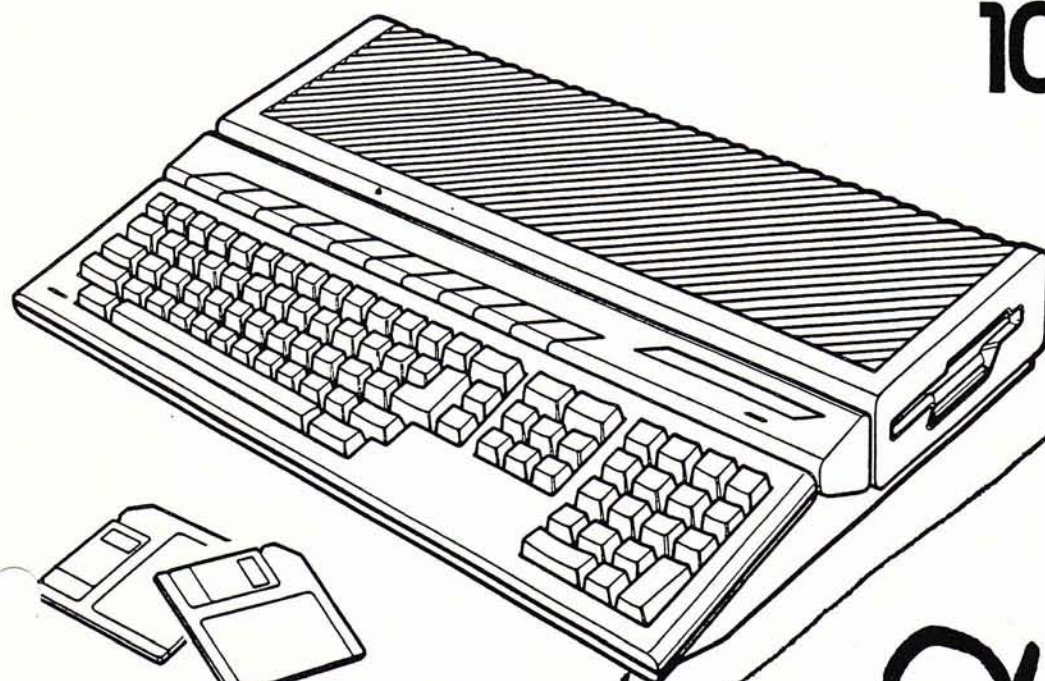
A little later, Xerox machines began showing up in places like public libraries where they were being used by the public to make copies of articles and sections of books. This hurt the

magazine industry far more than it did the book industry. It generally cost more to xerox a whole book than it did to buy the book outright, so whole book copying was almost totally confined to out-of-print books. The publishers weren't too concerned with this, as they weren't making money from out-of-print books. (By the way, this was the first real sign that copyright had become almost totally a protection for revenue, and had all but ceased being protection of intellectual ownership. In fact, a pernicious new wrinkle had crept into the picture. People could now buy and sell copyright! I could write a book and sell you the ownership, the right to say "I wrote this.")

In the mid-1970's, video cassette systems began appearing, and the next crisis hit. Pay channels such as HBO were transmitting movies, and people were recording them off-air. However, with declining theatre attendance, and despite an attempt to shift to cassette sales, this was doing serious damage to revenue. Worse, cassette rental caused an even greater drain as people rented cassettes and then copied them.

So we had the first attempt at copyguarding. Using a system that weakened the sync signal, a tape was made that normally could not be copied. Sort of. In fact, the old VCR's were so coarse that they didn't care about the sync and made faithful copies anyway. The newer VCR's had to have a strong sync to allow them to do all the special effects, and wrote a sync track of their own which allowed them to override the copyguard. For those of you not having either... no problem. Devices which replaced the sync became a dime a dozen.

The record industry meanwhile, released a whole new technology: compact disks (CD's). Fantastic sound and virtually indestructible, small and light. Just what the public wanted, right? Almost. While the price of CD players came down at tremendous speed, from \$1500 to \$250 in only two years, the



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price of the disks stayed at nearly twice the price of an old fashioned LP. At the same time, cassette reproduction improved to the point where they were almost indistinguishable from LP's. Also, cassettes were compact, convenient, and (unlike CD's) cheap.

In 1986, there were twin announcements that may also have spelled the doom for CD's, if not the end of the danger. DAT (digital audio tapes) and 8mm video cassette system with PCM recording meant that we could have cassettes which would allow for both playback AND recording of CD quality sound.

Xerographic machines, now called photocopiers, were everywhere and had managed to reach a price of five cents a page (the lowest it would get for pay machines). However, Canon had released a new form of the Xerox process which allowed it to manufacture home photocopiers. This brought the per page price down to around one and a half cents, and allowed you to violate copyright laws in the privacy of your own home.

Right, so now the stage is set. The three major forms of intellectual works: video/film, audio, and printed works, could all be duplicated by individuals in a home setting.

So far, I've left computers out of this. I've done so for a reason. If you recall, at the beginning of this article I mentioned patents. Computers are a different breed of problem, and next month I'll show you why, and show you where it's all going. I'll also surprise you with some points about all this I'm sure you've not considered, and finally show why illegal copying is here to stay and is not going to go away simply because someone is whining about it.

Technical Stuff

As you may know, the ST console

screen manager was designed to look like a VT52 terminal. Accordingly, there exist a number of special character sequences to allow the ST to do a number of special things. A list of these follows:

<ESC> A	Cursor up
<ESC> B	Cursor down
<ESC> C	Cursor right
<ESC> D	Cursor left
<ESC> E	Clear screen and home
<ESC> H	Cursor to home
<ESC> I	Cursor up with scroll
<ESC> J	Clear screen from cursor
<ESC> K	Clear line from cursor
<ESC> L	Insert line
<ESC> M	Delete line
<ESC> Y	Position cursor (see text)
<ESC> b	Select character colour
<ESC> c	Select background colour
<ESC> d	Clear screen to cursor
<ESC> e	Disable cursor
<ESC> f	Enable cursor
<ESC> j	Save cursor position
<ESC> k	Restore cursor position
<ESC> l	Clear line
<ESC> o	Clear line to cursor
<ESC> p	Reverse on
<ESC> q	Reverse off
<ESC> v	End of line wrap on
<ESC> w	End of line wrap off

The cursor positioning command looks like <ESC> Y <y+32> <x+32>, so if you wanted to move the cursor to line 10, column 15 you would do the following in Pascal: write(chr(33),"Y",chr(10+32),chr(15+32)).

For the colour setting commands, the full command is <ESC> b <colour> for character colour, and <ESC> c <colour> for background colour. The <colour> parameter is the colour from 0-15 as a binary number. So, to set the background colour to colour five, you would do the following: write(chr(33),"c",chr(5));.

The three screen clearing commands allow you to clear the line from the beginning of the line to the cursor (<ESC> o), from the cursor to the end of the line (<ESC> K), or the whole line (<ESC> l). You may also clear the screen from the start to the cursor (<ESC> d),

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from the cursor to the end of the screen (<ESC> J), and the whole screen (<ESC> E).

Cursor up and scroll (<ESC> I) moves the cursor up; if it is at the top of screen it will cause the screen to scroll down, while cursor up (<ESC> A) will simply stop.

Atari Reviews

The Realtizer from PrintTechnik (via Michtron Inc)

Some of you may have heard of a device for the Mac called a ThunderScanner. It allows a page to be scanned by using your ImageWriter to drag a photocell across a page repeatedly while measuring the darkness of the page. The result is a high resolution image from the document which can have it's contrast and brightness adjusted on the fly.

I have always wanted just such a thing for the ST. I still do not have it, but I have the very next best thing. The Realtizer accepts a normal NTSC video signal (from a VCR or camera) and will then digitize it VERY rapidly into one of several forms. In monochrome systems, the grey scale is translated into a dithered simulation of the intensity. In colour systems, the sixteen grey levels are translated into the sixteen colours.

You can select two, four, eight or sixteen levels on a scan where two is the fastest scan (taking around one fifth of a second) and sixteen is the slowest (taking about three seconds).

One problem with this technique is that each successive grey level is scanned one after the other. If you have a moving picture, each grey level is taken in turn, one fifth of second apart. A moving object will be smeared across each grey level. To remedy this, a "fast" mode is provided which takes all of the grey levels at one time. The picture takes as long to display, but you do not get the blurring. The only problem with THIS mode is that you require a 1040ST (or a one meg upgrade)

to run it as it requires a megabyte of storage.

There are several modes available for taking the sample. You can request the system to start sampling repeatedly, and, using the f-keys, you can change the contrast and brilliance until you get the picture you want, or you can go into a mode where a sample is taken only when you change these features using a small mouse driven pad in the upper left.

The final image can be saved in Neochrome or Animator (low-res only), Degas, Doodler or Bit Map (any resolution). As well, a built-in printer facility allows you to resize the drawing and then print to either Epson, C. Itoh 8510A, Canon PJ-1080A colour printer or Canon LPA2 laser printer. The Bit Map feature allows you to include captured images in a resource file using Resource Construction Kit.

While it cannot do colour, a program is provided to allow you to assemble colour pictures. To do this, you must have a colour video camera. Included in the package are three colour filters: red, green and blue. Making a colour picture consists of taking three separate shots of an image with the three filters in front of the lens. A special program will translate the three images into one colour image, and allows you to fine tune the colour.

Finally, a small graphics toolbox is included to allow cutting, pasting, and distorting of the image. This is much like the block features of Degas Elite and is a useful tool for other graphics programs which do not have these features.

The quality of this device is extremely good. While it is not photograph quality, it will allow you to produce images of good quality which can be then worked on with most of the major graphics packages.

The programs are almost totally GEM oriented and conform to the standard for interfacing. The Realtizer currently retails at \$330 and provides a hardware interface which plugs into the cartridge jack, and software on non-copygarded disks.

WEEKLY MEETING

ST SIG MEETING: August 12

The next meeting of the ST Special Interest Group will be held Wednesday, August 12 at 7:00 in room A121 of the Central Services Building at NAIT. Go north on 106 St., turn left at 118th Ave., and then immediately turn left again into the first parking lot. Call Lawrence Rozak (462-1526) or Keven Whitham (456-0077) for more details.

GENERAL MEETING: September 1

The next general meeting of the Edmonton Atari Computer Hobbyists is Tuesday, September 1 at 7:15 p.m. in room U116 of the Central Services Building at NAIT (see above for directions). First to E.A.C.H., then to school! Bring your computer, new software, and any original stuff you want to swap or sell. See you there!

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